Revised EIR
Per Limited Writ of Mandate issued January 30, 2009 regarding Public Safety - Fire Safety

On October 10, 2008, the Honorable Linda B. Quinn conducted a hearing on a Petition for Writ of Mandate (CEQA) filed in San Diego Superior Court by Preserve Wild Santee, The Center for Biological Diversity and The Endangered Habitats League, Inc. challenging the Environmental Impact Report ("EIR") for the Fanita Ranch development (the "Project") certified by the City of Santee on December 5, 2007. After oral argument, the court upheld the EIR on all issues other than on the issues related to the EIR's conclusions regarding fire safety. This finding by the court was based upon the City's decision to decline to adopt the use of controlled burning and grazing of Project open space areas.

The court, after further oral argument on January 30, 2009, issued a Limited Writ of Mandate directing the City of Santee to reconsider its determination that fire safety impacts are less than significant in the absence of controlled burns and grazing. The court further directed the City of Santee to take all relevant actions necessary to comply with CEQA related to this issue.

In compliance with CEQA and the court's direction, the City of Santee has prepared this Revised Environmental Impact Report ("REIR") that analyzes the fire safety impacts for the Fanita Project, with a focus on issues related to fuel management of the open space areas.

Section 4.13
Public Safety

The Public Safety Section of the EIR discussed five potential hazards to public safety: electromagnetic fields, hazardous materials, gas leaks from a wastewater treatment plant, nearby airports and wildland fires. This revised Public Safety Section of the EIR focuses on a discussion about wildland fires.[1] This discussion on wildland fires revises the original EIR and fully supplants previous discussion on this sole issue.

The EIR, certified by the City of Santee on December 5, 2007, contains a section which discusses the potential for wildland fires to occur within the Project Site. The discussion included the *Fanita Fire Protection Plan* (FFPP), and the management program for the Project. This section is based on the *Fanita Fire Protection Plan* developed by Firewise 2000, Inc. (2007) which anticipates fire events within the open space habitat preserve area without active management. The management program is part of the *Fanita Development Plan and Administrative Program* documents prepared by Forma Design (2007). The *Fanita Fire Protection Plan* is provided in Appendix J of the certified EIR, and fully incorporated herein by this reference.

[1] Please refer to the original EIR for discussions on Public Safety that are not related to Wildland Fire.

4.13.1 Environmental Setting

4.13.1.4 Wildland Fire

The Project Site is located within a high fire hazard zone in the central part of San Diego County. Further, the proposed development lies within the City of Santee Fire Department's Fire jurisdiction.

The Project Site is located in a moderately steep inland, coastally influenced zone, approximately 17 and a half miles inland from the ocean. The east, south, and west sides of the Project Site are bordered for the most part by scattered residential development and pockets of annual grasslands, Diegan coastal sage scrub, and coastal sage scrub.

Prior to the 2003 Cedar Fire, the undeveloped areas of dense native coastal sage scrub and chaparral vegetation on and off site consisted of a mix of species such as chamise (*Adenostoma fasciculatum*), California sagebrush (*Artemisia californica*), flat-topped buckwheat (*Eriogonum fasciculatum*), and laurel sumac (*Malosma laurina*), some of which were more than 6 feet in height. As is typical of scrub and chaparral species, a high percentage of these plants had an abundance of dead material. This was due to the effects of vegetation age and the region's Mediterranean climate. Long, wet winters promote significant new growth. Long, hot, and very dry summer seasons and occasional, multiyear droughts cause significant parts of these plants to die back. All of these plants are adapted to wildfires, which they need for species regeneration.

Following the large number of wildfires that burned through southern California in October 2003 and 2007, including the Cedar Fire, the Witch Creek Fire, and Harris Fire, fire planning policies have been revised at both the state and local levels. As of July 14, 2004, the County of San Diego approved new fire code ordinances that have changed the landscape standards, building standards, and road widths and grades for new construction in wildland/urban interface areas. In November 2004 the City adopted an administrative policy for fire safe development within wildland-urban interface (WUI) areas. After the Cedar Fire, an analysis of this policy was conducted by the Fire Department to ensure that homes built to these standards would have survived the Cedar fire. This analysis revealed that the City's WUI standards were some of the most restrictive in the State. In June of 2006, during the adoption of the 2001 California Fire Code, the WUI Policy was adopted as amendments to the Code without change. Recently the City adopted the 2007 California Fire Code and once again the fire code requirements were reviewed. Post fire analysis of the Witch Creek and the Harris fires indicated that one revision to the requirements was needed that would require tempered glass windows in homes built within the WUI, however, no other changes were made to the City's WUI fire safe development requirements as Santee's WUI development requirements continue to be some of the most restrictive in California.

Wildland Fire History for the Project Site: The Project Site is located within a high fire hazard zone and lies within the City of Santee Fire Department's Fire Protection District. This part of Santee burns frequently, with many wildfires originating in the SR-67 corridor and burning southwesterly into the Sycamore Canyon Open Space Preserve and the

Project Site. Since records have been kept (beginning in 1910), a total of 23 wildfires have burned through or in the area immediately surrounding the Project Site. Two wildfires in 1987 and one wildfire in 1989 burned portions of the Project Site for a total of 1,967 acres. The majority of the Project Site burned over in the 1994 Rocoso Fire and completely burned over again in the October 2003 Cedar Fire. Most of these wildfires occurred under Santa Ana wind conditions. The last two wildfires occurred during severe, prolonged periods of drought. The Project Site will burn again at some point, and quite possibly under the worst possible fire weather conditions like those that occurred in October 2003. The Site was not affected by the October 2007 wildfires in San Diego County.

4.13.2.3 Local

City of Santee Wildland Code Requirements

Upon the adoption of the 2007 California Fire Code, the City amended Chapter 47 (Requirements for Wildland-Urban Interface Areas) increasing requirements for developments built within the Wildland-Urban Interface (WUI) Areas. These provisions apply to the Fanita Development. The relevant sections include, but are not limited to, the following:

> **4703 Plans -** A Fire Protection Plan (FPP), approved by the Fire Chief, shall be required for all new developments within declared Wildland-Urban Interface (WUI) areas. The FPP shall include mitigation measures consistent with the unique problems resulting from the location, topography, geology, flammable vegetation, and climate of the proposed site. The FPP shall address water supply, access, building ignition and fire resistance, fire protection systems and equipment, defensible space and vegetation management in the fuel modification zone.
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> **4707 Fuel modified defensible space -** All new developments, subdivisions or tracts that are planned in or adjacent to wildland urban areas shall have a minimum of 100 horizontal feet of "fuel modified" defensible space between structures and wildland areas. Depending on the percentage of slope and other wildland area characteristics, the fuel modification zone may be increased beyond 100 feet, or reduced at the direction of the Fire Chief if conditions warrant. Fuel Modified Defensible Space generally shall be comprised of two distinct brush management areas referred to as, Zone One and Zone Two.
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> **4707.1 Fuel modified defensible space Zone One -** Zone One is the least flammable, and shall consist of pavement and permanently landscaped, irrigated and maintained ornamental planting. This vegetation should be kept in a well-watered condition and cleared of dead material. Requires year-round maintenance. Fire resistive trees are allowed if placed or trimmed so that crowns are maintained more than 10 feet from the structure. Highly flammable trees such as, but not limited to conifers, eucalyptus, cypress, and junipers are not allowed in WUI areas. This area shall be maintained by the property owner or homeowners associations.

4707.2 Fuel modified defensible space Zone Two - Zone Two shall consist of low-growing, fire-resistant shrubs and ground covers. Average height of new plants for re-vegetation should be less than 24 inches. In this zone, no more than 30% of the native, non-irrigated vegetation should be retained. Requires inspection and periodic maintenance. This area shall be maintained by the property owner or homeowners associations.

4707.3 Defensible space adjacent to roadways - An area of 10 feet from each side of fire apparatus access roads and driveways shall be maintained clear of all but fire-resistive vegetation. This area shall be maintained by the property owner or homeowners associations as with other defensible space areas.

4708.3 Construction materials within WUI areas - Prior to combustible materials being brought on site, utilities shall be in place, fire hydrants operational, an approved all-weather roadway must be in place, and the fuel modified defensible space must be established and approved.

4710.1.1 (Roofing) General - Roofs shall comply with the requirements of this chapter and the California Building Code, Chapters 7A and 15. Wood roofs are prohibited within WUI areas. Roofs shall have a Class "A" roof covering or a Class "A" roof assembly. Roofs shall have a roofing assembly installed in accordance with its listing and the manufacturer's installation instructions.

4710.1.4 Roof gutters - Gutters and downspouts shall be constructed of noncombustible material. Roof gutters shall be provided with the means to prevent the accumulation of leaves and debris in the gutter.

4710.3 Protection of eaves - Eaves and soffits shall be protected on the underside by materials approved for a minimum of 1-hour fire-resistance-rated construction or approved noncombustible construction. Fascias are required and must be protected on the backside by materials approved for a minimum of 1 hour-rated-construction or 2-inch nominal dimension lumber. The Fire Chief may allow less fire-resistive eave protection for those homes or elevations that do not directly front or face the wildland area.

4711 Exterior walls - Exterior walls of buildings or structures shall be constructed with materials approved for a minimum of 1-hour fire-resistance-rated construction on the exterior side or constructed with approved noncombustible materials.

4712.1 Decking, appendages and projections - Unenclosed accessory structures attached to buildings and projections, such as decks, shall be a minimum of 1-hour fire-resistive-rated construction or be constructed with approved noncombustible materials. When the attached structure is located and constructed so that the structure or any portion thereof projects over a descending slope surface greater than 10%, the area below the structure shall have all underfloor areas enclosed to within 6 inches of the ground with materials approved for a minimum of 1-hour fire-resistance-rated construction.

4712.2 Unenclosed underfloor protection - Buildings or structures shall have all underfloor areas enclosed to the ground with exterior walls constructed with materials approved for a minimum of 1-hour fire-resistance-rated construction or approved noncombustible construction.

4713 Ancillary buildings and structures - Ancillary accessory buildings or structures located less than 50 feet from a building containing habitable space shall have noncombustible exterior walls or walls constructed with materials approved for a minimum of 1-hour fire-resistive-construction or approved noncombustible construction. Class A roofing is required. Wood roofs are prohibited.

4714 Windows - Exterior windows, window walls and glazed doors, windows within exterior doors, and skylights shall be made with dual pane, tempered glass. The Fire Chief may allow less fire-resistive window protection for those homes or elevations that do not directly front or face the wildland area.

4715 Exterior doors - Exterior doors shall be approved noncombustible construction, solid core wood not less than 1 ¾ inches thick, or have a fire protection rating of not less than 20 minutes. This also applies to vehicle access doors.

4716.1 Combustible fencing - Fencing within the wildland urban designated areas shall be of an approved material. In some areas of the urban wildland area non-combustible fencing may be required. In any case, the connection point and closest five (5) ft. of fencing shall be non-combustible.

4716.2 Permanent Outdoor fireplaces, permanent barbecues and grills - Permanent outdoor fireplaces, permanent barbecues and grills shall not be built, or installed in the wildland-urban interface area without plan approval by the Fire Chief. Temporary/portable outdoor fireplaces shall be strictly prohibited within WUI areas.

4716.3 Spark arresters - Chimneys serving fireplaces, barbecues, incinerators or decorative heating appliances in which solid or liquid fuel are used, shall be provided with a spark arrester of woven or welded wire screening of 12-gauge standard wire having openings not exceeding ½ inch.

4716.4 Storage of firewood and combustible materials - Firewood and combustible materials shall not be stored in unenclosed spaces beneath buildings or structures, or on decks or under eaves, canopies or other projections or overhangs and shall be stored at least 20 feet from structures and separated from the crown of trees by a minimum horizontal distance of 15 feet.

4716.5 Water supply - All water systems, specifically fire hydrants and storage tanks, must be approved by the Fire Department. Developments that require new or “stand alone” water storage facilities may also be required to provide secondary or back-up systems, such as independently powered pumps that will ensure adequate water during emergencies.

4716.6 Wildland access - To adequately deploy resources to protect structures threatened by wildfires, emergency access to wildland areas may be required. Access may include but is not limited to, gated vehicle access points and/or personnel corridors between homes or structures. The need, number, and location of wildland access points will be determined by the Fire Chief.

4.13.3.4 Issue 4 – Wildland Fires

Public Safety Issue 4 Summary

Would implementation of the Project expose people or structures to a significant risk of loss, injury or death involving wildland fires?

Impact: ..... The Project may expose people and structures to potential substantial adverse effects from wildland fires.
Mitigation: ..... No mitigation required.
Significance Before Mitigation: ..... Less than significant.
Significance After Mitigation: ..... Less than significant.

Thresholds of Significance
Based on Appendix G of the CEQA Guidelines, implementation of the Project may have a significant adverse impact if it would expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.

Impact Analysis
The Impact Analysis is pursuant to the court's direction contained within the Limited Writ of Mandate issued January 30, 2009.

The wildland fire threat to homes is commonly termed the wildland-urban interface (WUI) fire problem. This refers to an area or location where a wildland fire can potentially ignite homes. In its simplest terms, the fire interface is any point where the fuel feeding a wildfire changes from natural (wildland) fuel to man-made (urban) fuel. For this to happen, wildland fire must be close enough for its flying brands or flames to contact the flammable parts of the structure (C.P.Butler 1974, Stanford Research Institute). That is, a structure ignites only if the radiant heat from the flame or firebrand come into contact for a long enough duration (residence time) with a flammable material. Strategies have been demonstrated in the WUI that work to protect structures from ignition. To reduce ignition from flame heat, the flame lengths are kept away from structures with a fuel modification zone or "fire buffer". The fuel modification zone deprives the flame heat of the necessary residence time to ignite a structure. To reduce ignition from wind-blown embers, the exterior of the structure is "hardened" with site design and architectural measures to prevent ignition.

Fanita Fire Protection Plan: As a result of the high fire risk in the Project Site vicinity, a Fire Protection Plan has been developed for the Project Site by Firewise 2000, Inc. (2007). The Fire Protection Plan, available in Appendix J of the certified EIR, was

prepared so that the entire Project Site (and surrounding neighborhoods) could survive future wildfires without structure loss and without loss of life and would not require the intervention of the City of Santee Fire Department. The Fire Protection Plan assumed that City engine companies may not be readily available due to incidents in other areas during wildland fire emergencies. An important project design feature of the Fire Protection Plan is that the Project be constructed to withstand wildfires with no structures or lives lost and without intervention from fire fighting personnel. In a letter dated April 2, 2009, Firewise 2000, Inc. reconfirmed that the conclusions of the Fanita Fire Protection Plan ("FFPP") are based on the following:

1. That the habitat open space (i.e., the Preserve) was unmanaged wildland vegetation.
2. The worst case Santa Ana wind and weather conditions would occur within the unmanaged wildland vegetation.
3. The Fire Protection Plan is based upon the BEHAVE Fire Model which provides considerable margin of safety by over-predicting flame length, rates of spread, and fire intensity by a factor of 2 (or double).
4. The Fire Protection Plan provides a minimum 100 foot fuel modification zone to address the theoretical 32.1-foot flame length predicted for Fuel Model 2 fuels within unmanaged wildland vegetation.
5. The Fire Protection Plan provides a minimum 130 foot fuel modification zone to address the theoretical 95-foot flame length predicted for Fuel Model 4 fuels within unmanaged wildland vegetation.

Based upon these parameters and the features of the FFPP, the FFPP concluded that there was no significant fire risk to this community. As reconfirmed in the April 2, 2009 letter from Firewise 2000, active management of the Preserve is not a required component of the FFPP and is not needed to support the conclusion in the FFPP.

Fanita Project Design Elements: The City of Santee WUI Fire Code amendments were based on the International Wildland-Urban Interface Code. The code requirements were then modified to make them more restrictive to meet local conditions and as a result are some of the most restrictive in California.

Structural Protection - The homes and buildings constructed for the Project would be constructed of fire-resistant materials per WUI Fire Code amendments all structures shall be built with:

1. noncombustible "Class A" roof assembly
2. one-hour fire rated eaves
3. one-hour fire resistive exterior walls
4. noncombustible roof gutters
5. one-hour fire resistive decks
6. dual pane tempered glass
7. approved fire resistive attic ventilation.

Fire Sprinklers - All structures would be installed with overhead sprinklers, including all garages, exterior balconies and overhangs (> 3 feet).

Ancillary Building/Structure - The Fire Code requires that all ancillary buildings or structures are required to be constructed of one-hour fire rated materials and a "Class A" roof assemblies.

Fencing - All fencing within 5 feet of any structure is required to be noncombustible to prevent fire transfer from the fence to any structure.

Fuel Modified Defensible Space - A 100 to 130-foot fuel modification zone has been incorporated around all development. WUI Code amendments require a two-zone fuel modified defensible space between the wildland and the Fanita development. Zone One is the least flammable, measured from the structure 50 feet toward the wildland, and shall consist of pavement and permanently landscaped, irrigated and maintained ornamental planting. Zone Two shall be the next 50 to 80 feet measured from the outer limits of Zone One away from the structure and toward the wildland and consist of low-growing, fire-resistant shrubs and ground covers. Average height of new plants for re-vegetation should be less than 24 inches. In this zone, no more than 30% of the native, non-irrigated vegetation should be retained.

Site Improvement and Maintenance - All permanent outdoor barbeques, grills, and fireplaces shall not be constructed without approval by the Fire Department and a building permit. Firewood and combustible materials shall not be stored in unenclosed spaces beneath buildings or structures, or on decks or under eaves, canopies or other projections or overhangs and shall be stored at least 20 feet from structures and separated from the crown of trees by a minimum horizontal distance of 15 feet.

Fire Resistive Landscape - Planting materials for landscaping throughout the Project Site would be restricted to noninvasive fire resistant ornamental plants and fire resistant native plants, depending on their location. The Fire Department shall provide an approved plant list for the Fanita Development.

Fire Suppression Access - Seventy-six (76) strategically located access points to the fuel modification zones would provide vehicle access for brush thinning and emergency access for firefighting.

Fire Hydrants - The water systems for the Fanita project is required to produce 1500 gallons per minute (GPM) flow for 3 hours for the residential areas and 2500 GPM for 3 hours for the commercial areas. Hydrants are required to be spaced at an average of 300 feet apart.

Homeowners Association - The Homeowners Association (HOA) would be responsible for maintaining fuel modified defensible space throughout the development as described in the Fire Protection Plan.

Fanita Fire Protection Plan Independent Expert Review: The City obtained two professional third-party reviews of the Fanita Fire Protection Plan ("FFPP") that analyzed the plan's wildland fire safety and the issue of open space fuel management. Also, local San Diego County communities designed with modern WUI strategies were reviewed for any fire impact from the Witch Creek Fire.

1. Jack D. Cohen, Research Physical Scientist with the Rocky Mountain Research Station Fire Sciences Laboratory reviewed the Fanita Fire Protection Plan. Jack Cohen's research on WUI strategies is widely respected in the fire safety industry. Mr. Cohen reviewed the FFPP and concluded that:

> "Given the Fanita Fire Protection Plan specification for a home's materials and design and an area within 100-130 feet of the home, my previous research findings and professional experience indicate that the Fanita residential development will sufficiently resist ignition during an extreme wildfire to not have a significant 'fire safety risk'."

Mr. Cohen further concluded that:

> "Given the ignition resistant home ignition zones as specified by the Fanita Fire Protection Plan, the lack of active, periodic vegetation management in the Fanita open space will not significantly change the residential ignition potential. The Fanita Fire Protection Plan bases its specifications on a home ignition zone approach with the assumption of an extreme southern California chaparral fire behavior context. Thus, given an extreme wildfire, the home destruction potential and the level of 'fire safety risk' of the Fanita Project will be primarily determined by the residential ignition resistance (the home ignition zone) and not by the open space vegetation. The most effective fuel treatments occur within the home ignition zones and not in the wildland vegetation surrounding the residential development".

2. Don Oaks of Viking Research, independently analyzed the Fanita Fire Protection Plan. Mr. Oaks has over two decades of experience as the Fire Marshal of the Santa Barbara County Fire Department and co-chairs the Wildland-Urban Interface Committee for the California Fire Chief's Association. Mr. Oaks helped develop the concept of a Fire Protection Plan.

   Mr. Oaks independent analysis was based upon a site visit to the project site, and a review of the FFPP, the project design, and the Santee amendments to the 2007 California Fire Code related to wildland urban interface development.

   Mr. Oaks found that the FFPP is particularly well developed. It addressed structure protection in a more aggressive way than simply applying City code, in that it incorporates State and national standards, and 'industry good practice' as mandatory. In addition, that the FFPP provides an analysis of predicted fire behavior at various specific locations with the resulting risks being mitigated by

vegetative fuel management zones in excess of those normally called for by published codes.

The analysis concluded the following:

> "With respect to fuel management in the 'open space', it is my professional opinion that active management is not needed. Although the specific options included in the original proposed FFPP, under 5.2.12a, "controlled burning in the open space", and 5.2.12b, "grazing in the open space", are each worthwhile activities, the options are not necessary to the success of the FFPP to adequately protect the planned community. The original FFPP suggested one option or the other be used to improve the "open space". Particularly, with respect to the use of incremental burning, one of the benefits was the control of invasive, non-native species within the open space. The grazing was suggested as an alternative to the burning because of problems such as risk of fire escape, the inconvenience of smoke to the surrounding population, and/or the potential loss of specific habitat. The FFPP recognized, in the last sentence of 5.2.12a; ("*The Fanita habitat management plan will address the proper blend of habitat management techniques*.") that the maintenance of the "open space" would be a product of incorporating a variety of concerns other than fire, and that these two options were simply worthy of consideration. They were considered and rejected at this time. To be effective, the FFPP does not require the active management of the open space; therefore the cumulative effect of the FFPP, is to reduce the acknowledged fire safety risk to less than significant. The FFPP provides a protection level appropriate for a "stay-in-place" strategy."

3. During the month of October 2007, Santa Ana winds pushed the "Witch Creek Fire" in northern San Diego County and the "Harris Fire" in Southern San Diego County. The fires were similar to the Cedar fire of 2003 in that both fires started within the wildland of east San Diego County burning into homes within the urban developed areas to the west. Fire and Building Codes continue to evolve with regard to the protection of Wildland-Urban Interface developments. Experts continue to analyze the losses of these fires. The findings show that those homes that suffered losses were not constructed with the increased fire protection measures that would be applied today.

   The residential community of Rancho Santa Fe, in northern San Diego County, had three developments (The Bridges, Cielo and The Crosby) built to modern WUI construction requirements that were all threatened by the Witch Creek fire. These developments were similar to Fanita in that they were surrounded by open space preserve areas that were not actively managed and designed and developed to modern Wildland-Urban Interface requirements. As the fire progressed, it burned right up to the fuel modified defensible space designed to protect the development. None of the homes in these developments were destroyed in the

fire. In addition to noncombustible building design and construction requirements, these developments also had 100 ft of fuel modified defensible space. These developments were similar to Fanita in that they were surrounded by open space preserve areas with no active management. The City of Santee WUI Fire Code requirements meet or exceed the Rancho Santa Fe Fire Protection District's WUI requirements.

The General Role of Fuel Management Within the Open Space Next to a Fire Safe Community: Fuel management within the open space includes methods of controlled burning, grazing, hand treatment and herbicides. The general purpose of these methods is too slow or stop the fire in backcountry or undeveloped regions.

Fuel management within the open space may be an element of fire safety where adjacent structures, typically in rural backcountry areas, are not part of an overall fire protection plan or design. That is, fuel management of open space may be important when home sites are not designed with 100-foot fire buffers and are not constructed with materials designed to prevent ignition from wildland fire or wind-blown embers and are located next to a wildland open space fuel source. In this circumstance, the fuel management objective for fire safety may be to reduce or remove the fuel load factor from the three elemental parts of the fire-ignition triangle (heat, fuel, and oxygen).

Fuel management within the open space preserve must be distinguished from the fuel management of the fuel modified defensible space that occurs within a fire safe community. Fuel management in the fire safe community manages the fuel sources within the Home Ignition Zone to prevent transmission of wildland fire from the open space area. That is, the 100-foot fire buffer is maintained clear of vegetation, the structures are constructed of materials to prevent ignition from wind-blown embers, the auxiliary structures are designed to prevent flame transmission to the house, and fire resistive planting is required.

The County of San Diego Draft Vegetation Management Report (fourth draft December 23, 2008) discussed fuel management within 9 priority areas in the rural back county areas (Palomar Mountain, Laguna Mountain, Southeast County, Greater Julian, San Luis Rey West, Rancho, Santa Margarita, Northeast County-Warners, Cuyamaca-Laguna). The area where the Fanita project is located was not identified in the report as a priority area for vegetation management in the open space.

Controlled Burning – Controlled Burning is sometimes referred to as “prescribed burning”. Prescribed burning is the preplanned and controlled application of fire to fuels in either a natural or modified state under prescribed conditions of weather, fuel moisture, soil moisture, etc. The prescription establishes the conditions needed to confine the fire to a predetermined area, and more importantly, to create heat intensity to achieve the desired burning objectives. Objectives could vary from a "cool" burn, to reduce fuels under a young sapling stand, to a "hot" burn, as in a replacement fire in a diseased, overmature stand. Prescribed burning is generally used in strategic locations when surrounding land use has few residences and there are ecological benefits to improve the health of the vegetation community. In general, the disadvantages of prescribed burning are the uncontrolled escape of the fire causing damage and effects of smoke.

Grazing – Grazing by herbivores such as goats or other livestock may be a tool used for vegetation management of open space. The animals forage on the vegetation which removes the fuel load within the open space. Grazing drawbacks are several. First, the animals need to be cleaned of biological propagules between areas on which they feed. They could become agents for spread of weeds or movement of native species into areas that they currently do not grow. Second, they are indiscriminant foragers and may not feed on the vegetation that is intended but rather feed on sensitive plant species that are desired to be kept in place for the special status.

Hand Treatment – Hand cutting of vegetation by a labor force is able to remove a large amount of biomass. The cuttings must be removed from the site which may require heavy machinery or chippers for ease of transport. The drawbacks of hand treatment are that over application might have a strong impact on the vegetation. Overworking a site might permanently alter the vegetation structure or at least yield a change that lasts for several years. And, as with grazing, without significant training on the part of the labor forces there may be indiscriminant removal of special status plant species. Another drawback may be the start of an accidental fire within the open space as occurred on the City's Sky Ranch project and more recently reported in the news as the potential start of the Santa Barbara Fire.

Herbicides – Herbicides have been used as a tool for vegetation treatments. However, industry discussion note that when using herbicides in natural communities, use of safety precautions is imperative. By law, herbicides must only be applied in accordance with label instructions and precautions. Extreme care should be taken to avoid contacting nontarget species with the herbicide, and to minimize drift. When applying herbicides, plants should not be sprayed to the point of runoff as this can harm nontarget species. The minimum effective concentration of an herbicide should be used, rather than higher concentrations. In natural communities, only closed containers should be used for herbicides, as open containers can spill. In state-designated nature preserves or state-owned natural areas, herbicides should only be applied by a licensed pesticide applicator or operator. Herbicides can be transported from treated roadsides to the aquatic environment through spray drift, volatilization, overland runoff, or by infiltration to subsurface ground water. Herbicides may volatilize before or after they contact foliage. The most direct route to adjacent waters, however, is through surface runoff. Because many of these herbicides are water-soluble, they reside a short period of time at the point of application before being transported to local waterways. The general disadvantages to herbicide use are:

- Some herbicides are non-biodegradable and are harmful for a long period of time.
- They are all slightly toxic.
- They can cause illnesses. Glyphosate, a herbicide, can cause eye and skin problems and upper respiratory effects in the user. Paraquat can cause irritations to the skin and may also lead to death, accidental and even suicidal. Many other diseases and illness can be caused such as cancer, nausea, headaches, chest pains, and fatigue.

- The can be carried into streams by runoff rainwater or leached into underground water supplies polluting them.
- Herbivores may eat the plants treated with herbicides and then carnivores eat the herbivores. The toxic herbicide would be passed up the food chain increasing in concentration each time resulting in cancers and even deaths.

The Need For Active Management of the Fanita Open Space Preserve: Firewise 2000 and the independent reviews of the Fanita Fire Protection Plan found that, given the design conformance to the FFPP of the Project, active management of the vegetation in the Open Space Preserve was not needed to ensure there is adequate wildland fire safety for the Project. This conclusion is also supported by investigations conducted by the US Forest Service, Fire Sciences Laboratory, Rocky Mountain Research Station.

The USDA Forest Service General Technical Report (PSW-GTR-173.1999) found:

> "…that effective fuel modification for reducing potential WUI fire losses need only occur within a few tens of meters from a home, not hundreds of meter or more from a home. [The] research indicates that home losses can be effectively reduced by focusing mitigation efforts on the structure and its immediate surroundings."

The report further found that:

> "The evidence suggests that wildland fuel reduction for reducing home losses may be inefficient and ineffective: ineffective because wildland fuel reduction for several 100 meters or more around homes is greater than necessary for reducing ignitions from flames; ineffective because it does not sufficiently reduce firebrand ignitions."

The report concluded that home ignitions depend on the home materials and design and only those flammables within a few tens of meters of the home (home ignitability). The wildland fuel characteristics beyond the home site have little if any significance to WUI home fire losses.

The report explains that "Extensive wildland vegetation management does not effectively change home ignitability". The report acknowledges that there may be an ecosystem purpose to wildfire for biological reasons. Foundationally, the report found that there is an imperative to separate the problem of the wildland fire threat to homes from the problem of ecosystem sustainability due to changes in wildland fuels.

Santee Fire Department Determination for no Controlled Burn Management: The City concluded that no controlled burning would occur in the open space surrounding the Fanita Project. Controlled burns are typically conducted in remote areas far away from structures to prevent these fires from burning out of control. Many controlled burns have led to uncontrolled fires. Fanita WUI Fire Code requirements were designed to protect the Development and the community of Santee in the worst case scenario without the need for managing the open space. Fuel Modified Defensible Space and construction

requirements were intended to protect the Project given any fire scenario. While the Fanita Development will be designed to be protected from fire, the City concluded that it would be incompatible to propose controlled burning so close to habitable structures. In addition, existing homes surrounding the Fanita Development were built in the 50's and 60's and are mostly wood structures with no fire protective WUI requirements. Smoke from controlled burns would pose a health and pollution risk within the community of Santee and to the metropolitan basin. San Diego County and the Fanita area have experienced catastrophic fires in 2003 and 2007. The emotional impact of these fires will linger with residents for years to come. It is the mission of the City and the Fire Department to protect its' citizens from all of the effects of fire. It would be inappropriate to subject residents of Santee to controlled burns so close to the community.

Grazing: The Project open space is intended for the preservation of sensitive plant species and sensitive natural habitat vegetation communities. Targeted grazing within the open space requires extensive management to prevent overgrazing. Overgrazing may result in soil erosion. Grazing can be detrimental to sensitive plant species and habitat communities because animals are indiscriminant in their foraging and they could affect sensitive plant species. Grazing is not as effective on slopes greater that 30 percent and generally does not reduce the woody vegetation in high fuel hazard areas. Therefore, because grazing may be inconsistent with the open space values for habitat preservation, has limitations on utility, and requires qualified management to prevent overgrazing, it may be inconsistent with the objectives for the open space for conservation of sensitive species and it has no benefit to fire safety when used in the open space given the other project WUI design features.

Hand Treatment – Hand cutting of vegetation within the Fanita Open Space Preserve has similar drawbacks as management by grazing. The work effort requires a trained work force administered by an on-site biologist to ensure the appropriate vegetation is cut and more desirable vegetation is left intact. A significant drawback is the risk of starting an uncontrolled fire in close proximity to residences. Therefore, hand treatment for vegetation management in the open space has significant potential risks to biology and uncontrolled fire within the open space while having no clear benefit to overall fire safety given the other Project WUI design features.

Herbicides – In general, industry literature indicates agencies are reluctant to use herbicides for vegetation management of fuel loads within open space preserves. Though they may have a role in very small applications, herbicides also have potential significant adverse effects on water quality and health effects for both human and animal species. Therefore, use of herbicides in the Fanita Open Space Preserve for vegetation management is incompatible because of the proximity of the activity to the general public that would be using the extensive open space trail system.

Impact Finding: Given that the Fanita open space habitat holds significant biological values and would be an important community resource, the Fanita Fire Protection Plan modeling assumed that the open space would be unmanaged wildland vegetation and provided fuel modification zones consistent with the modeling. Because of the Project design (use of the fire-resistant materials and fire sprinklers) and the requirements of the City and the Fire Protection Plan, which requires fuel modification zones and structures to be built with fire resistant materials, the Project would have a less than significant impact

with respect to exposing people or structures to a significant risk of loss, injury, or death involving wildland fires within unmanaged vegetation.

Mitigation Measures
No mitigation measures are required.

4.13.4 Cumulative Impacts and Mitigation

Public Safety Cumulative Issue Summary

Would implementation of the Project have a cumulatively considerable contribution to a cumulative public safety impact considering past, present, and probable future projects?

Cumulative Impact Fanita Contribution
Exposure to wildfires Not cumulatively considerable

Wildland Fires
A significant risk of wildland fires currently exists in the City, as evidenced by the October 2003 Cedar Fire. Although the City has developed policies to manage the fire risk, existing and future residents and structures would continue to be at risk. Furthermore, implementation of the Project could contribute to the risk of wildland fires because it would result in development in an area prone to wildfires and would create a new development edge near a wildfire-prone area. However, with the implementation of the Fanita Fire Protection Plan, which requires fuel modification zones and structures to be built with fire resistant materials and assumes no active management of open space. the impacts from the Project would not be cumulatively considerable.

4.13.6 References

The following are fully incorporated herein by reference:

EOD Technology, Inc. 2006. Draft Final Engineering Evaluation and Cost Analysis (EE/CA) Report for Areas D, G, and H, Former Camp Elliot, San Diego, California. Prepared for United States Army Corps of Engineers. January 2006.

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Padre Dam Municipal Water District (PDWMD). 2004. Water Reclamation Facility Risk Management Plan. June 8, 2004.

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Firewise 2000, Inc., Fanita Fire Protection Plan confirmation letter. Prepared for the City of Santee. April 2, 2009.

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County of San Diego Preliminary Draft Vegetation Management Report (fourth draft December 23, 2008). Prepared by the County of San Diego.

Targeted Grazing: A Natural Approach to Vegetation Management and Landscape Enhancement, Chapter 12: Targeted Grazing to Manage Fire Risk, Charles A. Taylor, Jr., Professor and Superintendent of the Texas A&M Agricultural Research Station.